Appendix A
Public Notification that a potential event was occurring
(40 CFR §50.14(c)(1)(i))

FIGURE A-1
NATIONAL WEATHER SERVICE PUBLIC ZONES

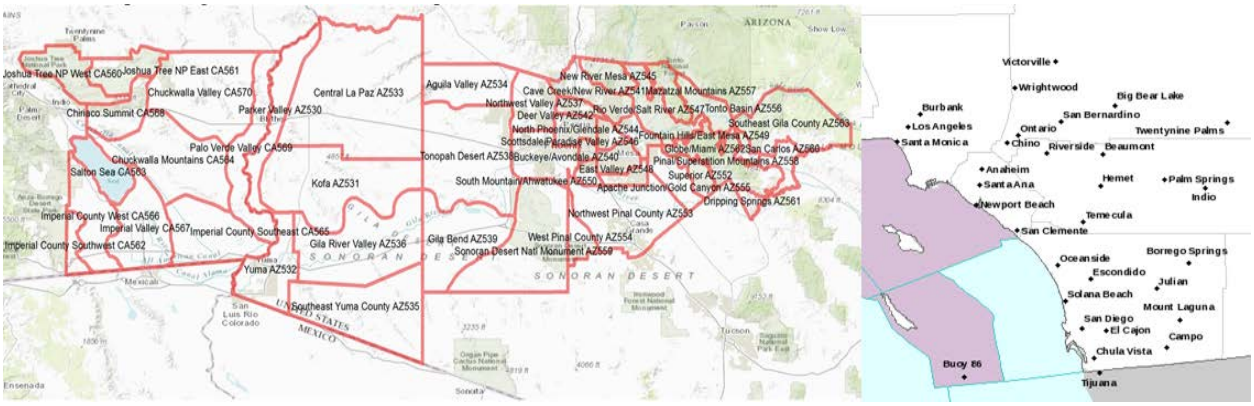


Fig A-1: Illustrates the public zones serviced by the National Weather Service Office in Phoenix and San Diego. Imperial County, including southeast sections of Riverside County are part of the reporting public zone areas from the Phoenix office

FIGURE A-2
FAVORABLE CONDITIONS FOR THUNDERSTORMS EXPECTED

AREA FORECAST DISCUSSION
National Weather Service San Diego CA
925 PM PDT FRI SEP 16 2016
.SYNOPSIS...
Areas of coastal low clouds will develop and expand overnight through Saturday morning. Warming will occur mainly inland Saturday and Sunday due to offshore flow, with Sunday being very warm to hot, along with low humidities and locally breezy conditions inland both days. An upper low pressure system will bring a chance of thunderstorms Monday through Tuesday to the region, even along the coast. With some dry air lingering near the surface, there could be lightning strikes with little or no rainfall Monday, but rainfall will be more likely Monday night and Tuesday. A cooling trend will begin Monday and continue most of the week. Fair weather, except for coastal low clouds and fog will return by midweek.
.DISCUSSION...FOR EXTREME SOUTHWESTERN CALIFORNIA INCLUDING ORANGE... SAN DIEGO...WESTERN RIVERSIDE AND SOUTHWESTERN SAN BERNARDINO COUNTIES...
The upper low for Monday and Tuesday will bring large amounts of moisture from the south due to mid level 20-25 knot winds. On Monday, the moisture will be in the 750-500 MB layer with a dry layer below. Maximum updraft CAPE values will be 300-500 J/kg in that layer for parts of the area, especially from San Diego and Orange Counties west over the coastal waters. With mid-level moisture and instability could very easily be dynamically triggered by a 75-knot 250-mb jet max over San Diego. **These favorable conditions for thunderstorms will migrate from south to north over the region Monday**, with dry lightning strikes being a threat due to the low humidities below 750 mb, and precipitation amounts should be quite low Monday, probably a few hundredths of an inch or less except over highest terrain where the dry layer will be much shallower. By Monday night, moisture increases below 750 mb, and conditions more favorable for rainfall will occur as enough moisture and instability aloft will occur for more thunderstorms through Tuesday. Rainfall amounts are difficult to determine this early, but 1/4 to 1/2 inch is quite possible anywhere in our forecast area. Upper level broad trough develops over the west coast by Wednesday and forces our upper low east/northeast out of the area, though ECMWF holds on to an upper low to our southwest Wednesday which could potentially prolong precip. Most likely we will return to fair weather with temperatures near normal and probably areas of coastal stratus. An upper high off the coast could bring warming toward the end of next week.

Fig. A-2: As early as September 16 mid-level moisture leading to unstable atmospheric conditions was expected to lead to thunderstorms over the region on Monday, September 19, 2016. Source: AFD from NWS SGX; Iowa Environmental Mesonet; https://mesonet.agron.iastate.edu/wx/afos/p.php?pil=AFDSGX&e=201609170425.

FIGURE A-3
LOW PRESSURE OFF SOCAL COAST TO BRING MID-LEVEL MOISTURE

URGENT - FIRE WEATHER MESSAGE
NATIONAL WEATHER SERVICE SAN DIEGO CA
221 AM PDT SAT SEP 17 2016
...THUNDERSTORMS MONDAY COULD BRING DRY LIGHTNING...
A LOW PRESSURE SYSTEM OFF THE COAST WILL BRING MID-LEVEL MOISTURE AND INSTABILITY FROM THE SOUTH ON MONDAY. THIS WILL CREATE A CHANCE OF THUNDERSTORMS MONDAY THROUGH TUESDAY. THE LOWER LAYERS OF THE ATMOSPHERE WILL REMAIN VERY DRY MONDAY AND WILL CONTRIBUTE TO A THREAT OF DRY LIGHTNING. DUE TO THE STRENGTH OF THE LOW PRESSURE SYSTEM... THERE COULD BE FREQUENT DRY LIGHTNING FROM THE MOUNTAINS WESTWARD TO THE COAST. MOISTURE WILL INCREASE MONDAY NIGHT AND LOWER THE RISK OF DRY LIGHTNING.
CAZ243-248-250-255>258-265-552-554-172100-
/O.CON.KSGX.FW.A.0004.160919T1300Z-160920T0300Z/
SAN DIEGO COUNTY COASTAL AREASSAN BERNARDINO AND RIVERSIDE COUNTY VALLEYS - THE INLAND EMPIRESAN DIEGO COUNTY INLAND VALLEYS-SAN BERNARDINO COUNTY MOUNTAINSINCLUDING THE MOUNTAIN TOP AND FRONT COUNTRY RANGER DISTRICTS OF THE SAN BERNARDINO NATIONAL FOREST-RIVERSIDE COUNTY MOUNTAINSINCLUDING THE SAN JACINTO RANGER DISTRICT OF THE SAN BERNARDINO NATIONAL FOREST-SANTA ANA MOUNTAINSINCLUDING THE TRABUCO RANGER DISTRICT OF THE CLEVELAND NATIONAL FOREST-SAN DIEGO COUNTY MOUNTAINSINCLUDING THE PALOMAR AND DESCANSO RANGER DISTRICTS OF THE CLEVELAND NATIONAL FOREST-SAN GORGONIO PASS NEAR BANNINGORANGE COUNTY COASTAL AREAS-ORANGE COUNTY INLAND AREAS-
221 AM PDT SAT SEP 17 2016
...FIRE WEATHER WATCH REMAINS IN EFFECT FROM MONDAY MORNING THROUGH MONDAY EVENING FOR THUNDERSTORMS WITH FREQUENT DRY LIGHTNING...
* THUNDERSTORMS...THUNDERSTORMS COULD BRING FREQUENT DRY LIGHTNING MONDAY INTO EARLY MONDAY EVENING. LIGHTNING IS EXPECTED WITH LITTLE OR NO RAINFALL.
* **WIND...MOST WIND SPEEDS WILL BE 15 MPH OR LESS...THOUGH LOCAL GUSTS OVER 35 MPH COULD OCCUR NEAR THUNDERSTORMS.**
* HUMIDITY...HUMIDITIES COULD BE 10 TO 15 PERCENT IN PORTIONS OF THE VALLEYS THROUGH EARLY AFTERNOON MONDAY...THOUGH HUMIDITY WILL INCREASE LATE MONDAY AFTERNOON.
* TIMING...THUNDERSTORMS COULD BEGIN EARLY MONDAY MORNING IN SAN DIEGO COUNTY AND SPREAD NORTH INTO ORANGE COUNTY AND PARTS OF RIVERSIDE AND SAN BERNARDINO COUNTIES BY NOON MONDAY. INCREASING MOISTURE WILL REDUCE THE DRY LIGHTNING THREAT MONDAY EVENING.
* OUTLOOK...THERE IS A CHANCE OF THUNDERSTORMS AGAIN TUESDAY...BUT HIGHER HUMIDITIES WILL REDUCE THE DRY LIGHTNING THREAT.
* IMPACTS...FREQUENT LIGHTNING STRIKES HAVE THE POTENTIAL TO PRODUCE MULTIPLE FIRE STARTS.

Fig. A-3: Thunderstorms due to a low pressure helping to circulate mid-level moisture into the region were forecasted on Monday, September 19. The lower, drier layer of the atmosphere near the surface was expected to promote the possibility of dry lightning. Local gusts of 35 mph near thunderstorms were a possibility. Source: RFW from NWS SGX; Iowa Environmental Mesonet; https://mesonet.agron.iastate.edu/wx/afos/p.php?pil=RFWSGX&e=201609170921.

FIGURE A-4
UPPER LEVEL LOW TO ENTRIAIN TROPICAL MOISTURE INTO SOUTHEAST CALIFORNIA

AREA FORECAST DISCUSSION
National Weather Service San Diego CA
326 AM PDT SAT SEP 17 2016
.SYNOPSIS...
Patches of low clouds over the coastal areas will likely burn off by mid-morning. A warming trend begins today, peaking on Sunday with inland temperatures in the 90s to 106 in the Inland Empire. Conditions will also be dry and breezy inland due to weak offshore flow. An upper level low will bring a chance of thunderstorms Monday through Tuesday, even along the coast. Lightning strikes with little or no rainfall is expected on Monday, but rainfall will be more likely Monday night and Tuesday. A cooling trend will begin Monday and continue most of the week. Fair weather, except for coastal low clouds and fog will return by midweek. Gusty west winds could develop in the mountains and deserts on Thursday and Friday. Fair and warmer again next Saturday.
.DISCUSSION...FOR EXTREME SOUTHWESTERN CALIFORNIA INCLUDING ORANGE...
SAN DIEGO...WESTERN RIVERSIDE AND SOUTHWESTERN SAN BERNARDINO
COUNTIES...
Numerical models continue to show the **upper low becoming nearly stationary off the coast of northern Baja Monday and Tuesday. It is expected to entrain moisture from the sub-tropics. On Monday the moisture will be mostly above 10000 feet with a deep layer of dry air below. The moisture and instability could produce elevated convection with little or no precipitation and tstms producing dry lightning strikes, with locally gusty and erratic winds**.
.FIRE WEATHER...
The biggest concern is for Monday as the upper low off the coast will combine with the mid-level moisture and instability to produce thunderstorms, with the chance of widespread dry lightning strikes. We have issued a fire weather watch for Monday into early Monday evening. While surface RH values will be increasing, there could still be local values below 10 percent through Monday midday. There is a possibly of local gusty winds over 35 MPH with thunderstorms as well, though the lightning will be the more likely threat. Increasing low-level moisture Monday night and Tuesday will lower the threat then, even though thunderstorms will be possible through Tuesday or Tuesday evening.

Fig. A-4: The upper level low off the southern California-northern Baja California coast was forecasted to entrain moisture tropical moisture, creating a moist mid-level layer above a dry lower layer and setting up conditions for thunderstorms and gusty and erratic outflow winds across the region. Source: AFD from NWS SGX; Iowa Environmental Mesonet;
https://mesonet.agron.iastate.edu/wx/afos/p.php?pil=AFDSGX&e=201609171026.

FIGURE A-5
HIGH LEVELS OF MOISTURE AND INSTABILITY IN THE ATMOSPHERE

AREA FORECAST DISCUSSION
National Weather Service San Diego CA
930 AM PDT SAT SEP 17 2016
.SYNOPSIS...
Fair weather will prevail today except for some gradually clearing low clouds near the coast, and locally gusty east winds near the mountain foothills. It will be warmer in most areas today through Sunday, with hot weather in some inland areas, including 100 to 105 in parts of the Inland Empire and 105 or higher in the lower deserts. Areas of low clouds will develop again tonight, lingering into Sunday, near the coast. An upper level low combined with moisture and instability aloft will bring a chance of thunderstorms Monday through Tuesday. Lightning on Monday could occur with little or no rainfall, but more low-level moisture Monday night and Tuesday could bring better precipitation amounts. A cooling trend will begin Monday, and low pressure trough will spread south over the West Coast Wednesday through Friday to bring more cooling and an increase in the coastal low clouds.
&&
.DISCUSSION...FOR EXTREME SOUTHWESTERN CALIFORNIA INCLUDING ORANGE...
SAN DIEGO...WESTERN RIVERSIDE AND SOUTHWESTERN SAN BERNARDINO
COUNTIES...
The upper low which is forming off the coast now will spin around through Monday, though models are trending a bit further west with the path of the low, roughly 200 miles off the coast Monday. **Regardless, disturbances associated with an 80-knot jet stream from the southwest will move through the flow over San Diego County with high amounts of moisture between 750 and 500 mb and instability in that layer**. Right now, the best maximum unstable CAPE is off the coast, but models are not very good with this variable two days in advance, so we could still potentially have high values over land.
The dry layer below 750 MB lingers through Monday, so dry lightning where little/no rainfall is occurring will be quite possible. With the dynamics from the low, there is the possibility of numerous lightning strikes, with best chances west versus east, so the coast and coastal waters could have lightning. Activity should move from south to north, with San Diego County thunderstorms possibly starting very early Monday morning, with OC/Inland Empire possibly around noon. By Monday night, moisture increases below 750 MB, so the chance increases that we will have precipitation with the storms, though amounts will still most likely be fairly light, with average amounts around 1/4 inch or less, despite high precipitable water amounts of 1.75 inches or higher at the coast Monday Night/Tuesday. Cloud cover will start the cooling trend Monday, and that will continue most of the week as a broader upper level trough moves down the West Coast Wed/Thu and possibly Fri. The low affecting us Mon/Tue should move E/NE out of the area around Wed, but some model runs, especially ECMWF, have a delay which could extend precip chances into Wed.

Fig. A-5: The upper low off of the southern California coast was expected to increase moisture levels and contribute to atmospheric instability. Source: AFD from NWS SGX; Iowa Environmental Mesonet; https://mesonet.agron.iastate.edu/wx/afos/p.php?pil=AFDSGX&e=201609022020.

FIGURE A-6
MOISTURE TO SURGE INTO SOUTHEAST CA AND IMPERIAL VALLEY

Area Forecast Discussion
National Weather Service Phoenix AZ
838 PM MST SAT SEP 17 2016
.SYNOPSIS...
A dry airmass will continue over the region this
weekend. Monday will see a significant increase in tropical
cloudiness from the south, leading to a chance of rain by Monday
night, especially over portions of southeast California and southwest
Arizona. Showers or light rain are possible through Wednesday.
Clearing skies are forecast Wednesday night through Friday.
.DISCUSSION...
Latest water vapor imagery and streamline analysis continues to show
a dry but deepening area of low pressure drifting southwestward off
the northern Baja Peninsula. PWATS in the bottom 10 percent of
climatology prevail across the Desert Southwest this evening and
dewpoints as low as the lower teens were again observed this
afternoon across portions of Southeastern California.
Light winds and clear skies will again provide favorable conditions
for radiational cooling, resulting in below normal temperatures
overnight. Minor adjustments to the short-term temperatures and
dewpoints were made this evening. Otherwise, the forecast remains on
track.
.PREVIOUS DISCUSSION...
**Models are consistently showing a significant incursion of moisture
into the area, funneling up from the Gulf of California beginning
Sunday evening-**--being forced up between the cutoff low and the high
pressure anchored over the Rio Grande. **The moisture surge will
initially move into southeast CA---the Imperial Valley and the lower
Colorado River valley, bringing dense high and mid-level cloudiness**
with some light rain likely by late Monday into Tuesday. By late
Tuesday the moisture will stream into Arizona and bring a slight
chance of rain for Tuesday for the Phoenix area. By Wednesday morning
the moisture will be rapidly picked up by a short wave, quickly
drying out with the seasonal westerlies returning. As for
temperatures most areas should still be near 100 (near normal)
through Monday but can expect a marked drop into the low 90s by
Tuesday as the extensive cloudiness moves in. Temperatures should
stay in the 90s, below normal levels, for the remainder of the week.

Fig. A-6: Moisture was forecasted to be funneled northward causing a surge of moisture over southeast California and Imperial Valley which contributed to the formation of thunderstorms. Source: AFD from NWS PSR; Iowa Environmental Mesonet; https://mesonet.agron.iastate.edu/wx/afos/p.php?pil=ZFPSGX&e=201609030941.

FIGURE A-7
GUSTY AND ERRATIC WINDS FORECASTED

AREA FORECAST DISCUSSION
National Weather Service San Diego CA
315 AM PDT SUN SEP 18 2016
.SYNOPSIS...
Today will be another very warm day across the region with highs from the upper 90s to 105 in the Inland Empire and from 105 to 107 in the Lower Deserts. The high inland temperatures will be accompanied by very low humidities and locally gusty offshore winds. Temperatures begin to decrease on Monday as clouds increase from the south, with a chance of thunderstorms Monday and Tuesday. The precipitation will move east on Wednesday with a cooling trend through the end of the work-week. Stronger onshore flow, with gusty west winds likely in the mountains and deserts on Thursday and Friday. Fair and warmer again for next weekend.
.DISCUSSION...FOR EXTREME SOUTHWESTERN CALIFORNIA INCLUDING ORANGE... SAN DIEGO...WESTERN RIVERSIDE AND SOUTHWESTERN SAN BERNARDINO COUNTIES...
This morning...Low clouds are developing over the coastal waters and the beaches. These clouds will likely spread a few miles inland, resulting in reduced visibilities on elevated coastal terrain before burning off by about 11 am. The stratus clouds are lower this morning than recent mornings and the Marine Layer inversion is stronger as heights rise aloft in response to the upper ridge spreading southward as the closed upper low drifts southward off the coast of northern Baja.
Expect very warm and dry conditions inland today, with locally gusty northeast to east winds. Daytime highs could range from the upper 90s to 105 in the Inland Empire and from 105 to 107 in the Lower Deserts. Near the coast, the marine layer will keep temps in the 70s, with upper 80s to upper 90s several miles inland.
The closed upper low is currently centered near 30N 120W. This initializes well with current model solutions, but is a little farther south and west than previous solutions indicated.
For Mon and Tue...the low will entrain moisture from the subtropics, mostly elevated on Monday, which will result in increasing mid and high clouds and lower temperatures. **Little or no precip is expected but the moisture could combine with elevated instability to produce dry lightning strikes with locally gusty and erratic winds**. The current model solutions are less favorable for dry lightning strikes over our area on Monday and more favorable for dry lightning strikes farther to the west and southeast. By Tue, the moisture mixes down to the lower elevations, increasing the chances for precip accumulations as the closed low opens up and moves northeast in response to a larger and more vigorous low/trough approaching from the northwest. By Wed, the showers/tstms have moved east as the low becomes absorbed in the westerlies.

Fig. A-7: Gusty and erratic winds due to thunderstorms was expected. However, the dry nature of the lower atmosphere throttled the chance of precipitation. Source: Iowa Environmental Mesonet; https://mesonet.agron.iastate.edu/wx/afos/p.php?pil=AFDSGX&e=201609031551.

FIGURE A-8
WINDS TO REACH 35MPH NEAR THUNDERSTORMS

URGENT - FIRE WEATHER MESSAGE
NATIONAL WEATHER SERVICE SAN DIEGO CA
552 AM PDT SUN SEP 18 2016
...THUNDERSTORMS MONDAY COULD BRING DRY LIGHTNING...
A LOW PRESSURE SYSTEM OFF THE COAST WILL BRING MID-LEVEL MOISTURE
AND INSTABILITY FROM THE SOUTH ON MONDAY. THIS WILL CREATE A
CHANCE OF THUNDERSTORMS MONDAY THROUGH TUESDAY. THE LOWER LAYERS
OF THE ATMOSPHERE WILL REMAIN VERY DRY MONDAY AND WILL CONTRIBUTE
TO A THREAT OF DRY LIGHTNING. DUE TO THE STRENGTH OF THE LOW
PRESSURE SYSTEM...THERE COULD BE FREQUENT LIGHTNING FROM THE
MOUNTAINS WESTWARD TO THE COAST. MOISTURE WILL INCREASE MONDAY
NIGHT AND LOWER THE RISK OF DRY LIGHTNING.
CAZ243-248-250-255>258-265-552-554-182200-
/O.CON.KSGX.FW.A.0004.160919T1300Z-160920T0300Z/
SAN DIEGO COUNTY COASTAL AREASSAN
BERNARDINO AND RIVERSIDE COUNTY VALLEYS - THE INLAND EMPIRESAN
DIEGO COUNTY INLAND VALLEYS-SAN BERNARDINO COUNTY MOUNTAINSINCLUDING
THE MOUNTAIN TOP AND FRONT COUNTRY RANGER DISTRICTS OF
THE SAN BERNARDINO NATIONAL FOREST-RIVERSIDE COUNTY MOUNTAINSINCLUDING
THE SAN JACINTO RANGER DISTRICT OF THE SAN BERNARDINO
NATIONAL FOREST-SANTA ANA MOUNTAINSINCLUDING
THE TRABUCO RANGER DISTRICT OF THE CLEVELAND NATIONAL
FOREST-SAN DIEGO COUNTY MOUNTAINSINCLUDING
THE PALOMAR AND DESCANSO RANGER DISTRICTS OF THE
CLEVELAND NATIONAL FOREST-SAN GORGONIO PASS NEAR BANNINGORANGE
COUNTY COASTAL AREAS-ORANGE COUNTY INLAND AREAS-
552 AM PDT SUN SEP 18 2016
...FIRE WEATHER WATCH REMAINS IN EFFECT FROM MONDAY MORNING
THROUGH MONDAY EVENING FOR THUNDERSTORMS WITH FREQUENT DRY
LIGHTNING...
* THUNDERSTORMS...THUNDERSTORMS COULD BRING FREQUENT DRY
LIGHTNING MONDAY INTO EARLY MONDAY EVENING. LIGHTNING IS
EXPECTED WITH LITTLE OR NO RAINFALL.
*** WIND...MOST WIND SPEEDS WILL BE 20 MPH OR LESS...THOUGH LOCAL**
GUSTS OVER 35 MPH COULD OCCUR NEAR THUNDERSTORMS.
* HUMIDITY...HUMIDITIES COULD BE 10 TO 15 PERCENT IN PORTIONS
OF THE VALLEYS THROUGH EARLY AFTERNOON MONDAY...THOUGH
HUMIDITY WILL INCREASE LATE MONDAY AFTERNOON.
* TIMING...THUNDERSTORMS COULD BEGIN VERY EARLY MONDAY MORNING
IN SAN DIEGO COUNTY AND SPREAD NORTH INTO ORANGE COUNTY AND
PARTS OF RIVERSIDE AND SAN BERNARDINO COUNTIES BY NOON
MONDAY. INCREASING MOISTURE WILL REDUCE THE DRY LIGHTNING
THREAT MONDAY EVENING.
* OUTLOOK...THERE IS A CHANCE OF THUNDERSTORMS AGAIN TUESDAY...
BUT HIGHER HUMIDITIES WILL REDUCE THE DRY LIGHTNING THREAT.
* IMPACTS...FREQUENT LIGHTNING STRIKES HAVE THE POTENTIAL TO
PRODUCE MULTIPLE FIRE STARTS.
PRECAUTIONARY/PREPAREDNESS ACTIONS...
A FIRE WEATHER WATCH MEANS THAT CRITICAL FIRE WEATHER CONDITIONS
ARE FORECAST TO OCCUR. LISTEN FOR LATER FORECASTS AND POSSIBLE
RED FLAG WARNINGS.

Fig. A-8: The dry nature of the air reduced the chance of precipitation, allowing strong winds to easily entrain and transport dust into Imperial County. Source: RFW from NWS SGX;
https://mesonet.agron.iastate.edu/wx/afos/p.php?pil=RFWSGX&e=201609181252.

FIGURE A-9
LARGE AMOUNT OF MOISTURE PUSHING NORTH INTO SOUTHEAST CALIFORNIA

Area Forecast Discussion
National Weather Service Phoenix AZ
1035 AM MST SUN SEP 18 2016
.SYNOPSIS...
Clear skies and dry conditions will continue to cover the region today and tonight, however increasing tropical clouds from the south are expected Monday and Tuesday. The chance of rain will increase, particularly over southeast California and southwest Arizona Monday night and Tuesday, spreading toward Phoenix by Tuesday afternoon. Stable weather will develop Wednesday, followed by a much drier airmass Thursday through Saturday.
.DISCUSSION...
Clear skies are the rule across our forecast area this morning. Near normal temperatures are expected through Monday with highs just above 100 across the lower deserts.
A change to our tranquil conditions is on the way, however. **By early Monday morning a large plume of mid-upper atmosphere moisture will push north from Baja California and the Gulf of California, bringing thick cloud cover into southeast California and the Colorado River valley. This is tropical moisture from Tropical Storm Paine which will be dissipating. Initially this weather event will be just a lot of cloudiness across Imperial and Yuma counties.** Eventually that moisture will work its way down and bring a chance of rain for the area beginning Monday evening. By early Tuesday much of this moisture will shift to the north and east, moving into western and central Arizona. At this time there remains a bit of divergence with the various model solutions as far as where, when, and how much any rain may be. One thing that we can be fairly certain with is the rain will be of a more stable nature---mostly light rain and covering wide areas at a time. For now, chances appear very likely to get rain across Imperial, Yuma, eastern Riveride, and La Paz counties. Chances will later extend into counties to the east---Maricopa, Pinal, and Gila. Amounts right now appear to be modest with southeast California getting 0.15" to 0.30" and in Arizona amounts probably less than 0.15". We're still refining all this, trying to resolve the variation in the models. High confidence, however, reigns regarding the extensive cloudiness that we will see across the region. By late Tuesday into Wednesday much of that moisture will be swept up in a passing short wave, sweeping it out to the northeast.

Fig. A-9: A large amount of moisture was forecasted to surge northward into southeast California from what was then Tropical Storm Paine off of the west coast of Baja California. Paine was later upgraded to a hurricane. Source: AFD from NWS PSR; https://mesonet.agron.iastate.edu/wx/afos/p.php?pil=AFDPSR&e=201609181735.

FIGURE A-10
MOISTURE FROM PAINE PUSHING NORTH INTO SE CALIFORNIA AND SW ARIZONA

Area Forecast Discussion
National Weather Service Phoenix AZ
213 PM MST SUN SEP 18 2016
.SYNOPSIS...
Clear skies and dry conditions will continue over the region today and tonight, however increasing tropical cloudiness from the south is expected Monday and Tuesday. The chance of rain will increase, especially over southeast California and southwest Arizona Monday night and Tuesday, spreading toward Phoenix by Tuesday afternoon. Stable weather will develop Wednesday, followed by a much drier airmass Thursday through Saturday.
.DISCUSSION...
Visible satellite imagery this afternoon shows clear skies across the region. Water vapor satellite imagery in indicating a dry band in the atmosphere stretching from southern California across central Arizona and and New Mexico. To the south some moisture can be seen across southern Arizona and more especially, south over western Mexico. **Much of the moisture is outflow from Tropical Storm Paine to the south of the Baja California peninsula. The anticyclonic upper circulation of the tropical storm is pushing the moisture towards the north and northeast over the state of Sonora. The storm is forecast to move northwest which will provide a significant moisture surge up into southeastern California and southwestern Arizona.**
By early Monday morning a large plume of mid-upper atmosphere moisture will push north from Baja California and the Gulf of California, bringing thick cloud cover into southeast California and the Colorado River valley. This is tropical moisture from Tropical Storm Paine which will be dissipating. Initially this weather event will be just a lot of cloudiness across Imperial and Yuma counties. Eventually that moisture will work its way down and bring a chance of rain for the area beginning Monday evening. By early Tuesday much of this moisture will shift to the north and east, moving into western and central Arizona. At this time there remains a bit of divergence with the various model solutions as far as where, when, and how much any rain may be. One thing that we can be fairly certain with is the rain will be of a more stable nature---mostly light rain and covering wide areas at a time. For now, chances appear very likely to get rain across Imperial, Yuma, eastern Riveride, and La Paz counties. Chances will later extend into counties to the east---Maricopa, Pinal, and Gila. Amounts right now appear to be modest with southeast California getting 0.1" to 0.30" and in Arizona amounts probably less than 0.1". There is high confidence on the extensive cloudiness that we will see across the region.

Fig. A-10: Moisture from Tropical Storm Paine (soon to be upgraded to a hurricane) was circulated northward into southeastern California and southwestern Arizona, leading to the formation of thunderstorms over the area. Source: AFD from NWS PSR; https://mesonet.agron.iastate.edu/wx/afos/p.php?pil=AFDPSR&e=201609182113.

FIGURE A-11
MIDLEVEL MOISTURE EXPECTED TO INCREASE

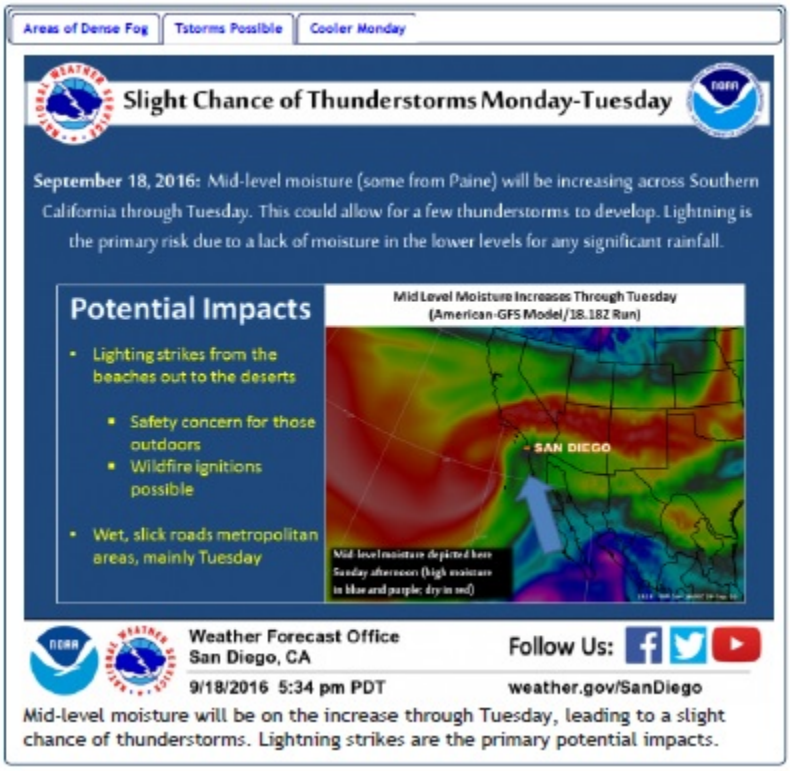
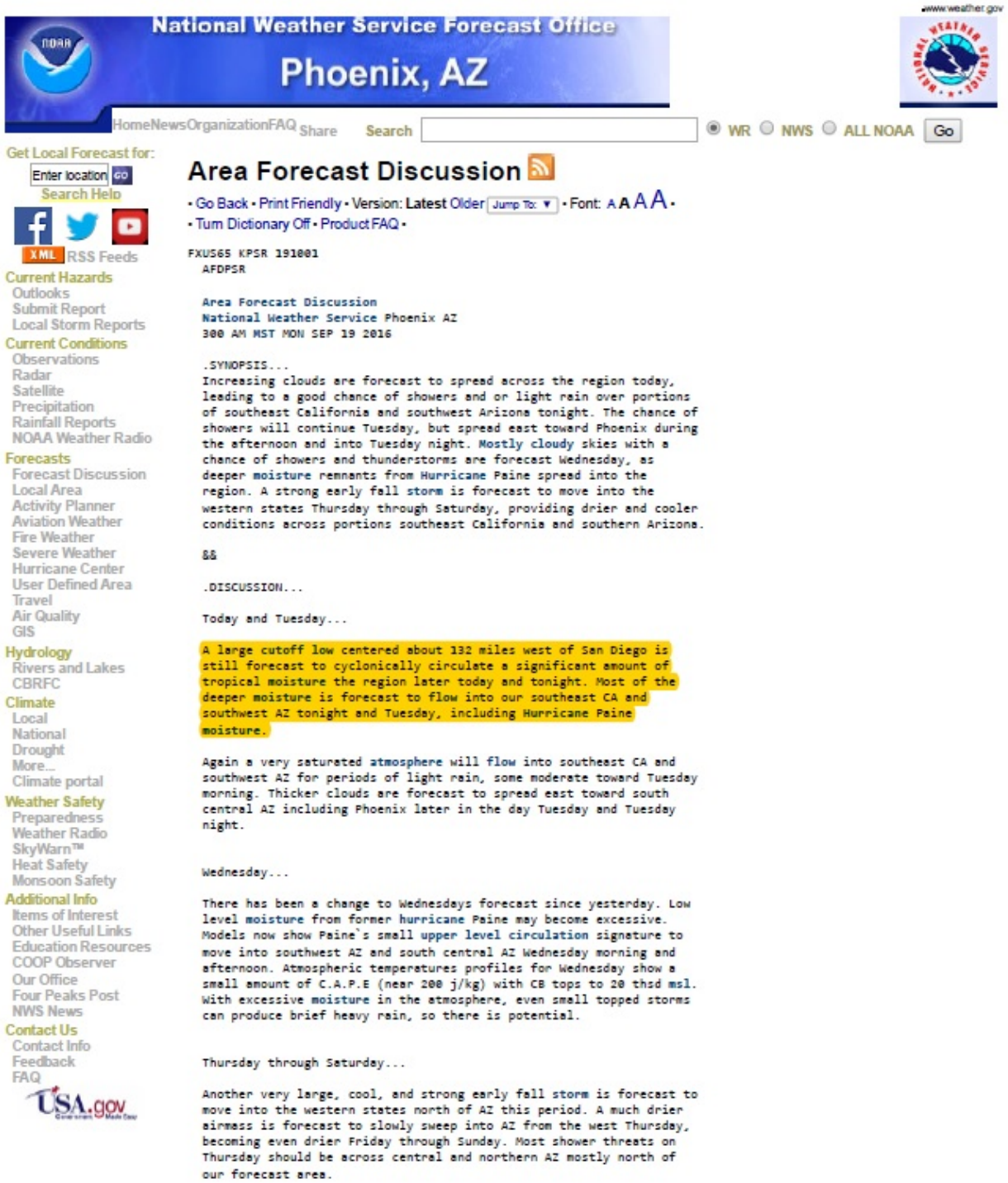


Fig. A-11: A Weather Story issued by the NWS San Diego office forecasted that midlevel moisture would be increasing during the coming days. Source: NWS San Diego.

FIGURE A-12
LOW PRESSURE FORECASTED TO CIRCULATE TROPICAL MOISTURE INTO SE CALIFORNIA



National Weather Service Forecast Office
Phoenix, AZ

www.weather.gov

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Submit Report
Local Storm Reports
Current Conditions
Observations
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Precipitation
Rainfall Reports
NOAA Weather Radio
Forecasts
Forecast Discussion
Local Area
Activity Planner
Aviation Weather
Fire Weather
Severe Weather
Hurricane Center
User Defined Area
Travel
Air Quality
GIS
Hydrology
Rivers and Lakes
CBRFC
Climate
Local
National
Drought
More...
Climate portal
Weather Safety
Preparedness
Weather Radio
SkyWarn™
Heat Safety
Monsoon Safety
Additional Info
Items of Interest
Other Useful Links
Education Resources
COOP Observer
Our Office
Four Peaks Post
NWS News
Contact Us
Contact Info
Feedback
FAQ

USA.gov

Area Forecast Discussion

• Go Back • Print Friendly • Version: Latest Older Jump To: • Font: A A A A •
• Turn Dictionary Off • Product FAQ •

FXUS65 KPSR 191001
AFDPSR

Area Forecast Discussion
National Weather Service Phoenix AZ
300 AM MST MON SEP 19 2016

.SYNOPSIS...
Increasing clouds are forecast to spread across the region today, leading to a good chance of showers and or light rain over portions of southeast California and southwest Arizona tonight. The chance of showers will continue Tuesday, but spread east toward Phoenix during the afternoon and into Tuesday night. Mostly cloudy skies with a chance of showers and thunderstorms are forecast Wednesday, as deeper moisture remnants from Hurricane Paine spread into the region. A strong early fall storm is forecast to move into the western states Thursday through Saturday, providing drier and cooler conditions across portions southeast California and southern Arizona.

&&

.DISCUSSION...

Today and Tuesday...

A large cutoff low centered about 132 miles west of San Diego is still forecast to cyclonically circulate a significant amount of tropical moisture the region later today and tonight. Most of the deeper moisture is forecast to flow into our southeast CA and southwest AZ tonight and Tuesday, including Hurricane Paine moisture.

Again a very saturated atmosphere will flow into southeast CA and southwest AZ for periods of light rain, some moderate toward Tuesday morning. Thicker clouds are forecast to spread east toward south central AZ including Phoenix later in the day Tuesday and Tuesday night.

Wednesday...

There has been a change to Wednesdays forecast since yesterday. Low level moisture from former hurricane Paine may become excessive. Models now show Paine's small upper level circulation signature to move into southwest AZ and south central AZ Wednesday morning and afternoon. Atmospheric temperatures profiles for Wednesday show a small amount of C.A.P.E (near 200 j/kg) with CB tops to 20 thsd msl. With excessive moisture in the atmosphere, even small topped storms can produce brief heavy rain, so there is potential.

Thursday through Saturday...

Another very large, cool, and strong early fall storm is forecast to move into the western states north of AZ this period. A much drier airmass is forecast to slowly sweep into AZ from the west Thursday, becoming even drier Friday through Sunday. Most shower threats on Thursday should be across central and northern AZ mostly north of our forecast area.

Fig. A-12: Low pressure off of the coast of southern California was expected to circulate tropical moisture from Hurricane Paine into the region. Source: NWS San Diego.

FIGURE A-13
HURRICANE PAINE SENDS MOISTURE NORTHWARD INTO SE CALIFORNIA AND SW ARIZONA

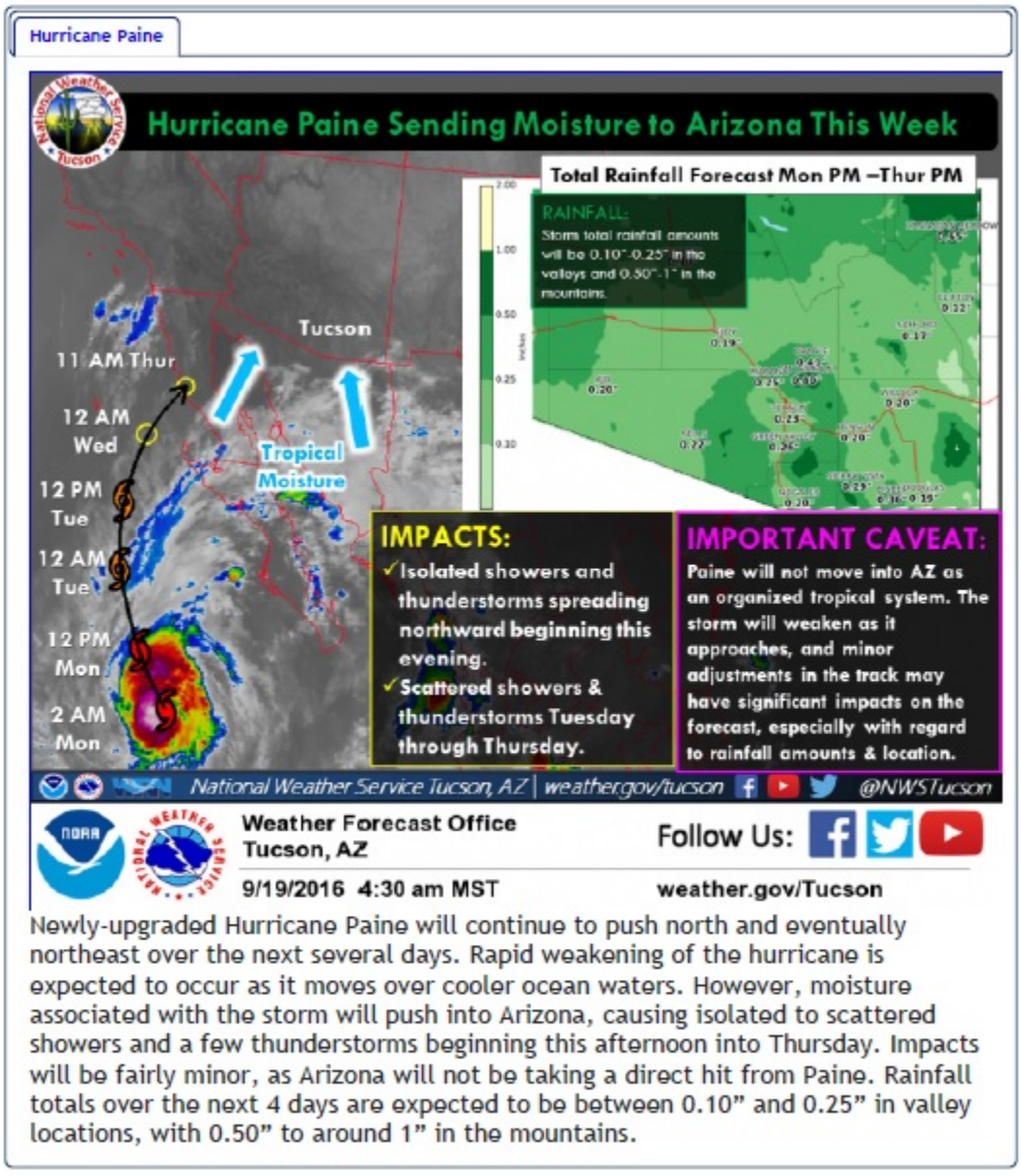


Fig. A-13: Tropical Storm Paine was upgraded to Hurricane Paine and sent large amounts of moisture surging northward into southeastern California and southwestern Arizona. Source: NWS Tucson.

FIGURE A-14
HURRICANE PAINE INJECTS MOISTURE SURGE INTO DESERT SOUTHWEST

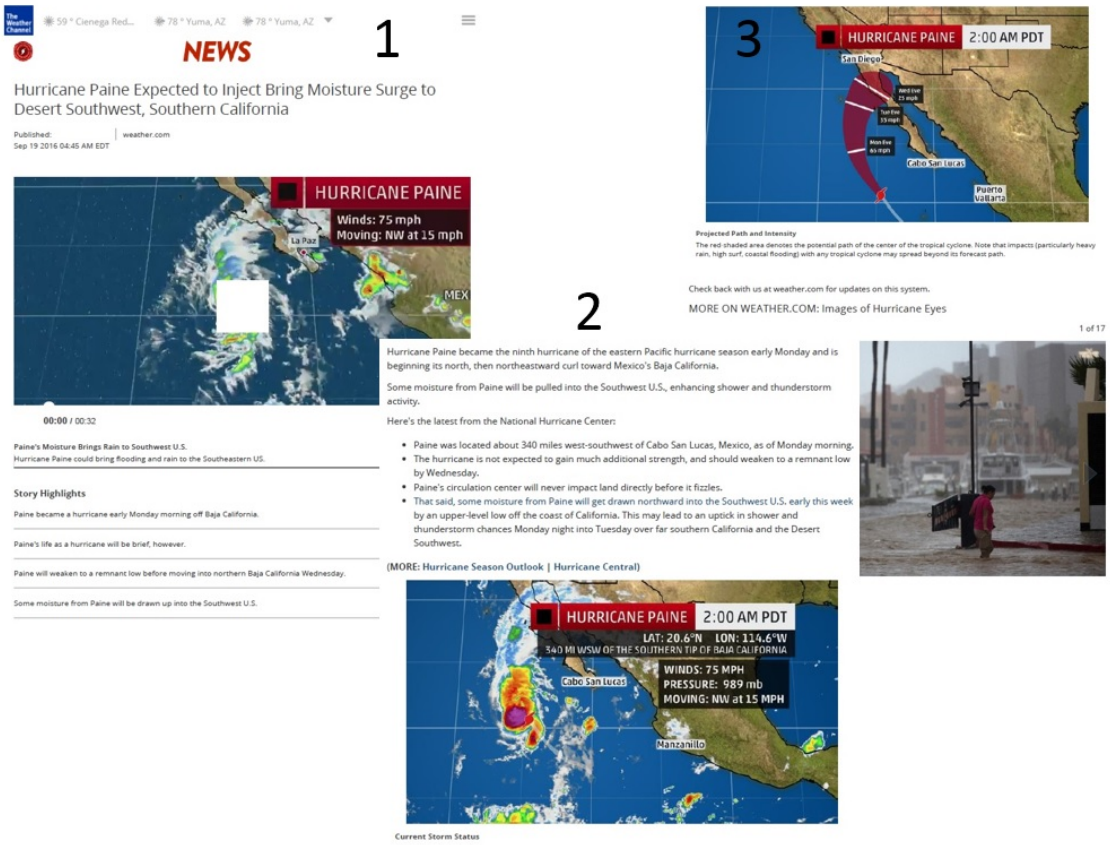


Fig. A-14: Hurricane Paine injected a surge of tropical moisture into the desert southwest, leading to conditions suitable for thunderstorms. Source: The Weather Channel.

FIGURE A-15
LOW PRESSURE CIRCULATES TROPICAL MOISTURE FROM HURRICANE PAINE INTO THE REGION

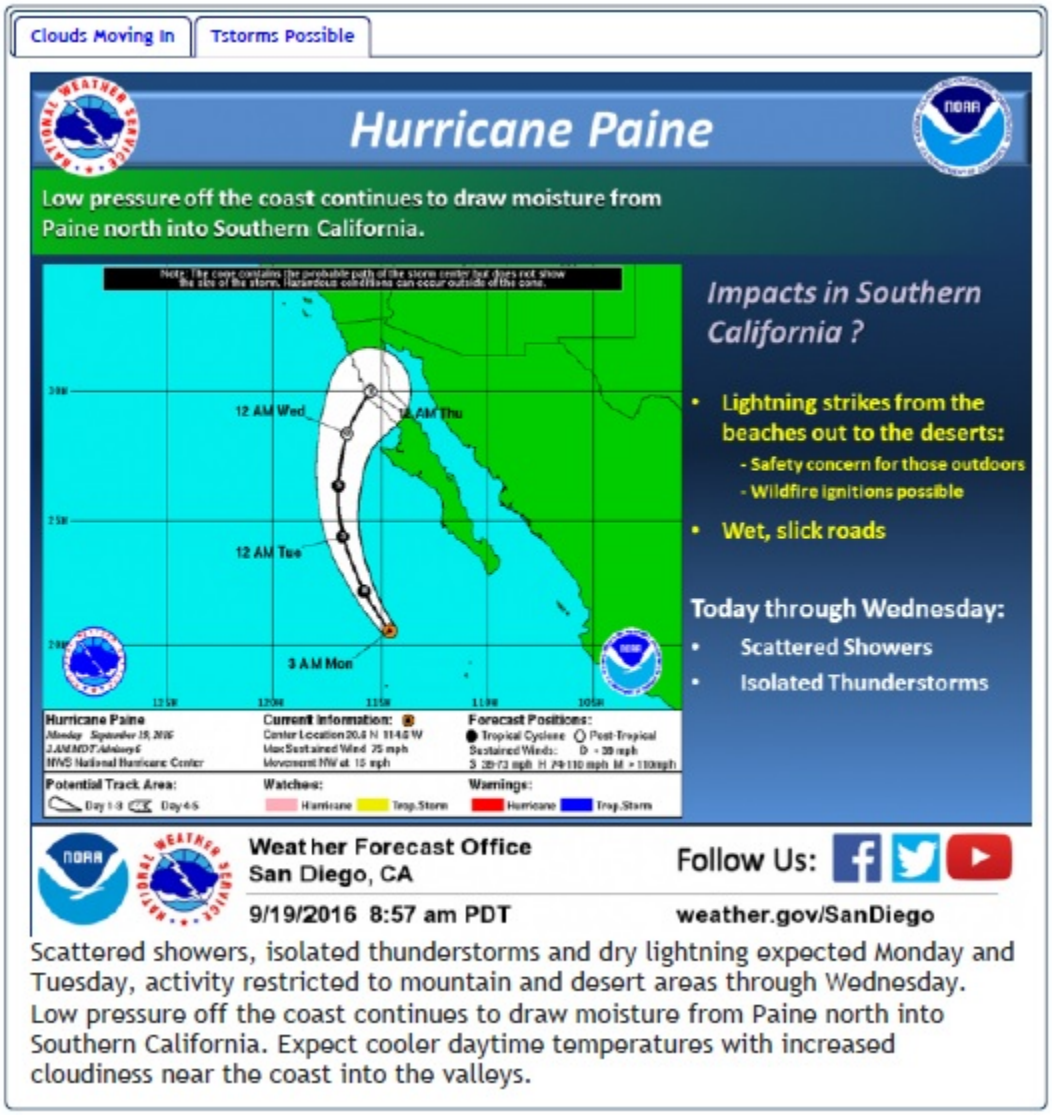
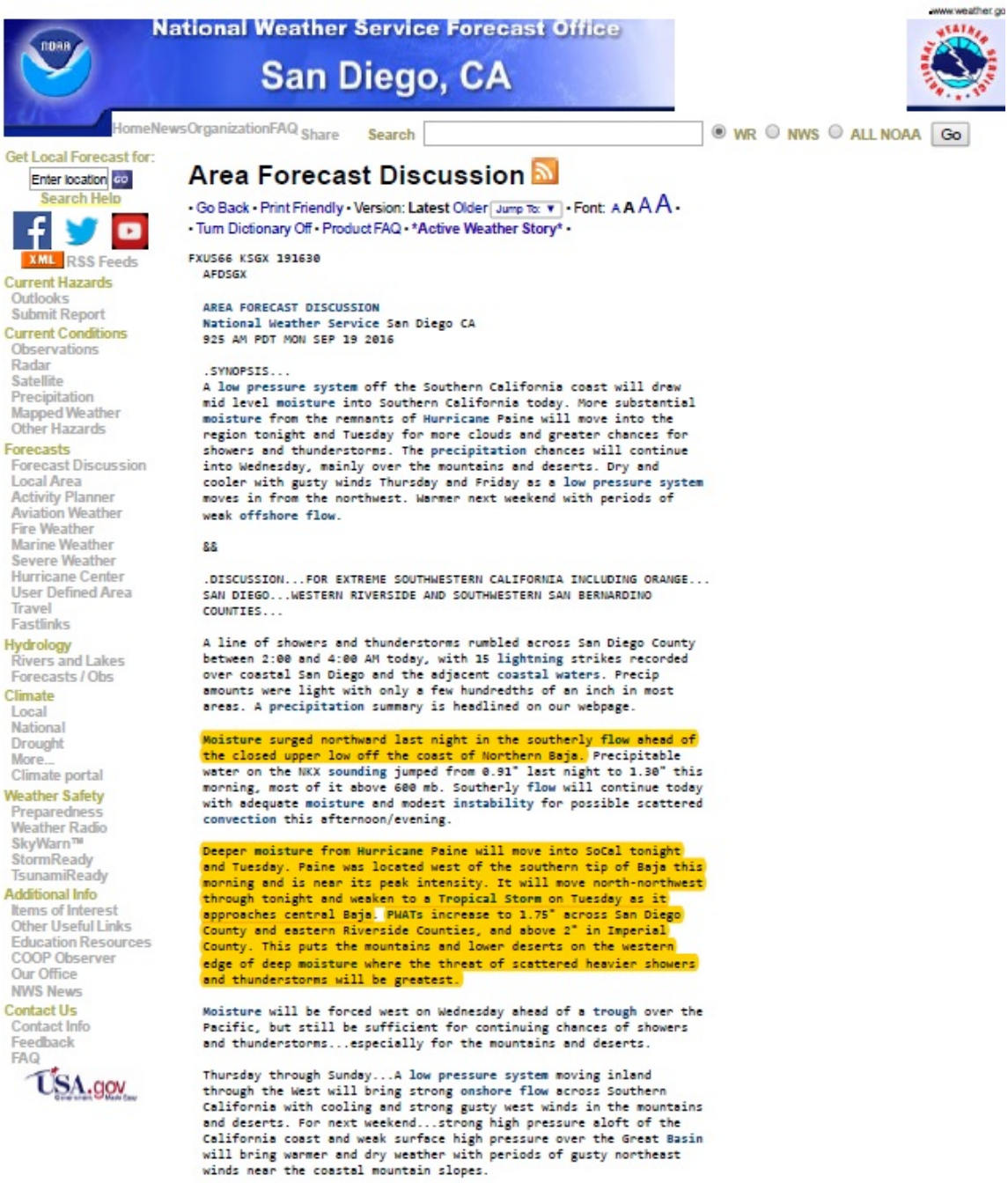


Fig. A-15: Low pressure off of the southern California coast circulated copious amounts of tropical moisture from Hurricane Paine into the region. Source: NWS San Diego.

FIGURE A-16
HURRICANE PAINE CONTINUES TO CIRCULATE MOISTURE INTO THE REGION



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Area Forecast Discussion

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FXUS66 KSGX 191630
  AFDSGX

  AREA FORECAST DISCUSSION
  National Weather Service San Diego CA
  925 AM PDT MON SEP 19 2016

  .SYNOPSIS...
  A low pressure system off the Southern California coast will draw
  mid level moisture into Southern California today. More substantial
  moisture from the remnants of Hurricane Paine will move into the
  region tonight and Tuesday for more clouds and greater chances for
  showers and thunderstorms. The precipitation chances will continue
  into Wednesday, mainly over the mountains and deserts. Dry and
  cooler with gusty winds Thursday and Friday as a low pressure system
  moves in from the northwest. Warmer next weekend with periods of
  weak offshore flow.

  &&

  .DISCUSSION...FOR EXTREME SOUTHWESTERN CALIFORNIA INCLUDING ORANGE...
  SAN DIEGO...WESTERN RIVERSIDE AND SOUTHWESTERN SAN BERNARDINO
  COUNTIES...

  A line of showers and thunderstorms rumbled across San Diego County
  between 2:00 and 4:00 AM today, with 15 lightning strikes recorded
  over coastal San Diego and the adjacent coastal waters. Precip
  amounts were light with only a few hundredths of an inch in most
  areas. A precipitation summary is headlined on our webpage.

  Moisture surged northward last night in the southerly flow ahead of
  the closed upper low off the coast of Northern Baja. Precipitable
  water on the NKX sounding jumped from 0.91" last night to 1.30" this
  morning, most of it above 600 mb. Southerly flow will continue today
  with adequate moisture and modest instability for possible scattered
  convection this afternoon/evening.

  Deeper moisture from Hurricane Paine will move into SoCal tonight
  and Tuesday. Paine was located west of the southern tip of Baja this
  morning and is near its peak intensity. It will move north-northwest
  through tonight and weaken to a Tropical Storm on Tuesday as it
  approaches central Baja. PWATs increase to 1.75" across San Diego
  County and eastern Riverside Counties, and above 2" in Imperial
  County. This puts the mountains and lower deserts on the western
  edge of deep moisture where the threat of scattered heavier showers
  and thunderstorms will be greatest.

  Moisture will be forced west on Wednesday ahead of a trough over the
  Pacific, but still be sufficient for continuing chances of showers
  and thunderstorms...especially for the mountains and deserts.

  Thursday through Sunday...A low pressure system moving inland
  through the West will bring strong onshore flow across Southern
  California with cooling and strong gusty west winds in the mountains
  and deserts. For next weekend...strong high pressure aloft of the
  California coast and weak surface high pressure over the Great Basin
  will bring warmer and dry weather with periods of gusty northeast
  winds near the coastal mountain slopes.
```

Fig. A-16: The combination of low pressure off of the southern California coast and Hurricane Paine near Baja California circulated copious amounts of tropical moisture into the region. Source: NWS San Diego.

FIGURE A-17
HURRICANE PAINE PUMPS MOISTURE INTO THE REGION

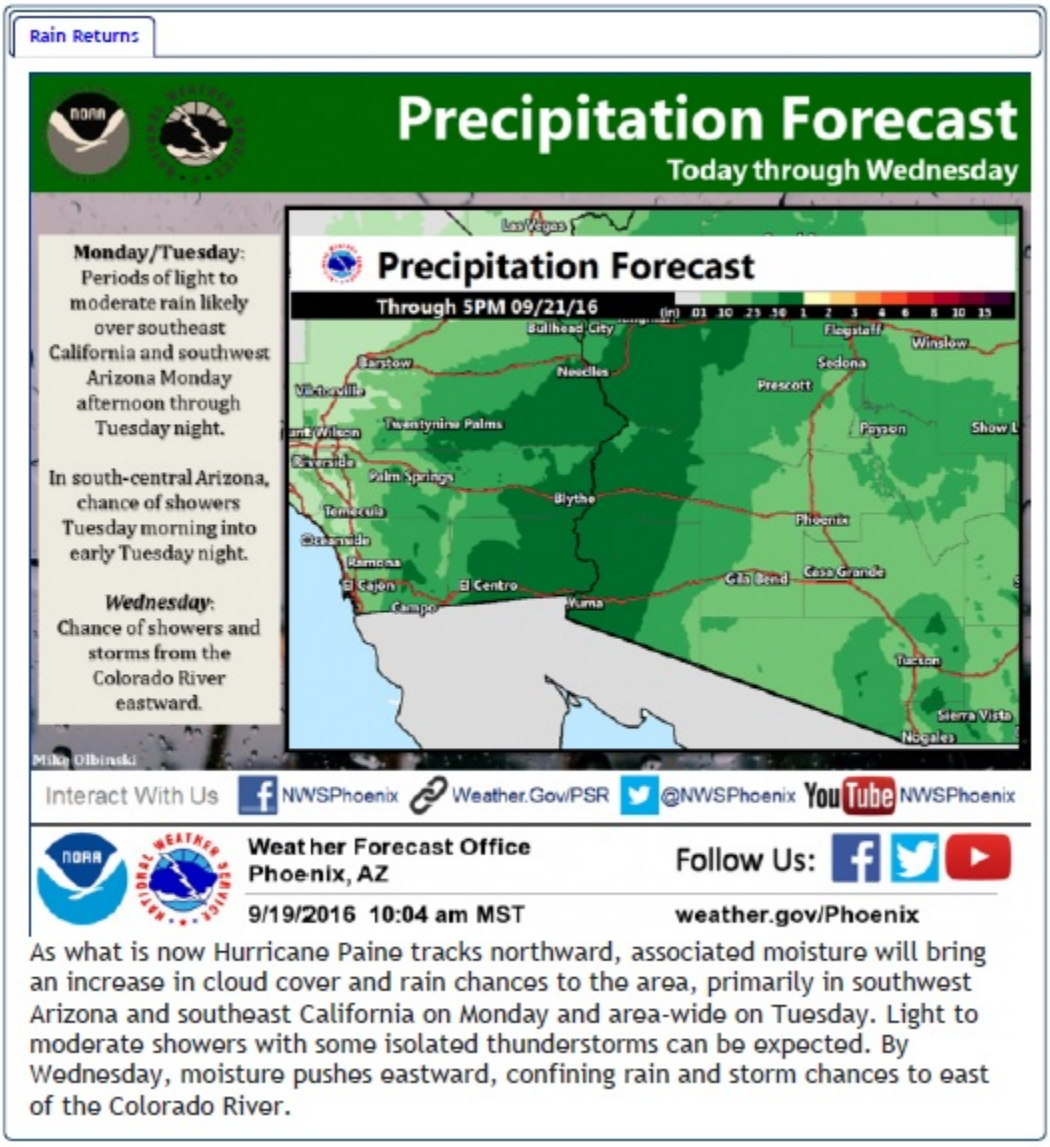
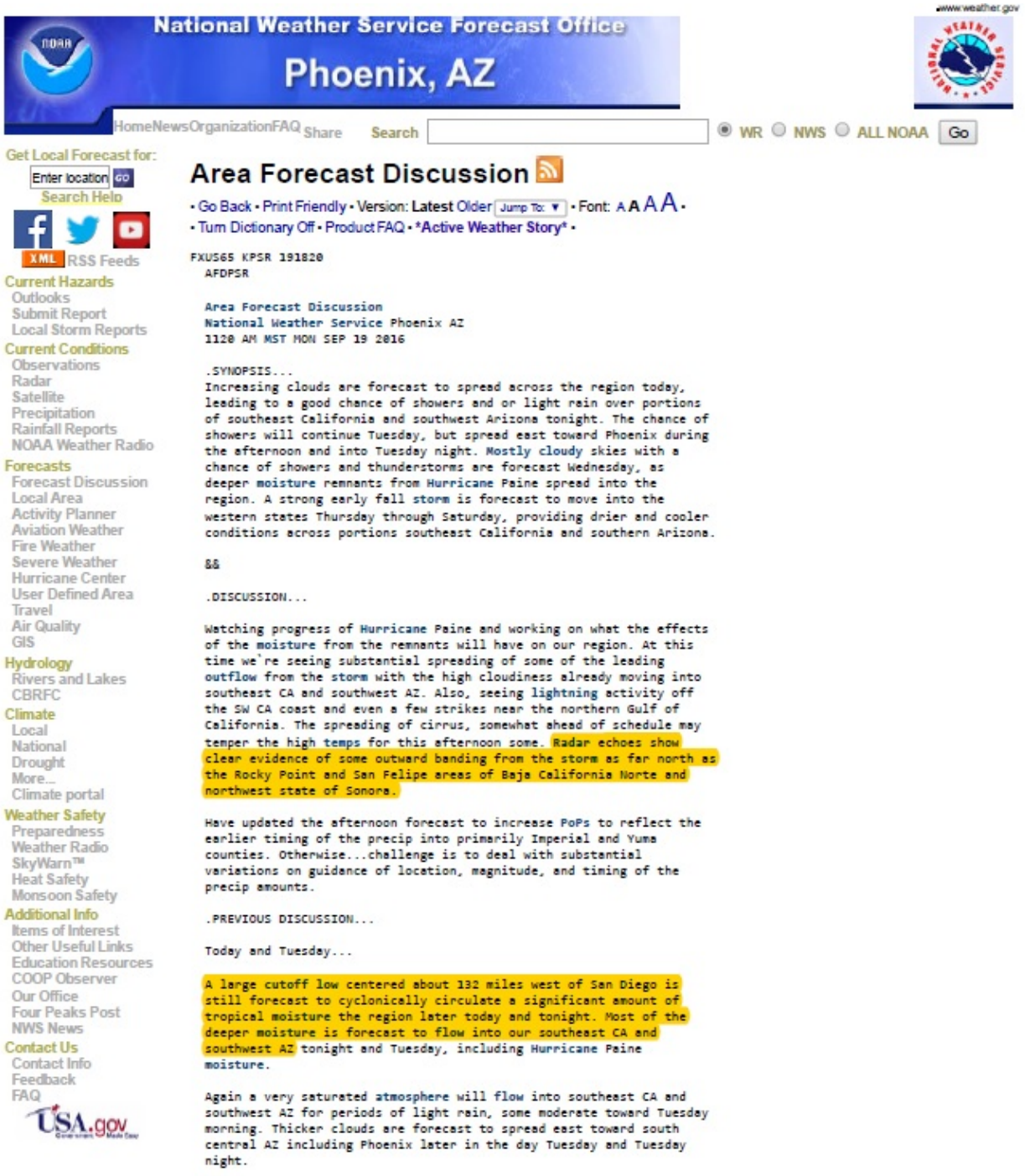


Fig. A-17: As Hurricane Paine tracked north it pumped more moisture into the region which promoted the formations of thunderstorms. Source: NWS Phoenix.

FIGURE A-18
STRENGTH OF STORM PRODUCES STRONG RADAR RETURNS



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FXUS65 KPSR 191820
  AFDPSR

  Area Forecast Discussion
  National Weather Service Phoenix AZ
  1120 AM MST MON SEP 19 2016

  .SYNOPSIS...
  Increasing clouds are forecast to spread across the region today,
  leading to a good chance of showers and or light rain over portions
  of southeast California and southwest Arizona tonight. The chance of
  showers will continue Tuesday, but spread east toward Phoenix during
  the afternoon and into Tuesday night. Mostly cloudy skies with a
  chance of showers and thunderstorms are forecast Wednesday, as
  deeper moisture remnants from Hurricane Paine spread into the
  region. A strong early fall storm is forecast to move into the
  western states Thursday through Saturday, providing drier and cooler
  conditions across portions southeast California and southern Arizona.

  &&

  .DISCUSSION...

  Watching progress of Hurricane Paine and working on what the effects
  of the moisture from the remnants will have on our region. At this
  time we're seeing substantial spreading of some of the leading
  outflow from the storm with the high cloudiness already moving into
  southeast CA and southwest AZ. Also, seeing lightning activity off
  the SW CA coast and even a few strikes near the northern Gulf of
  California. The spreading of cirrus, somewhat ahead of schedule may
  temper the high temps for this afternoon some. Radar echoes show
  clear evidence of some outward banding from the storm as far north as
  the Rocky Point and San Felipe areas of Baja California Norte and
  northwest state of Sonora.

  Have updated the afternoon forecast to increase PoPs to reflect the
  earlier timing of the precip into primarily Imperial and Yuma
  counties. Otherwise...challenge is to deal with substantial
  variations on guidance of location, magnitude, and timing of the
  precip amounts.

  .PREVIOUS DISCUSSION...

  Today and Tuesday...

  A large cutoff low centered about 132 miles west of San Diego is
  still forecast to cyclonically circulate a significant amount of
  tropical moisture the region later today and tonight. Most of the
  deeper moisture is forecast to flow into our southeast CA and
  southwest AZ tonight and Tuesday, including Hurricane Paine
  moisture.

  Again a very saturated atmosphere will flow into southeast CA and
  southwest AZ for periods of light rain, some moderate toward Tuesday
  morning. Thicker clouds are forecast to spread east toward south
  central AZ including Phoenix later in the day Tuesday and Tuesday
  night.
```

Fig. A-18: The strength of the storm pushing north was picked up by radar returns. Source: NWS Phoenix.

FIGURE A-19
TROPICAL MOISTURE BRINGS HEAVY CLOUD COVER

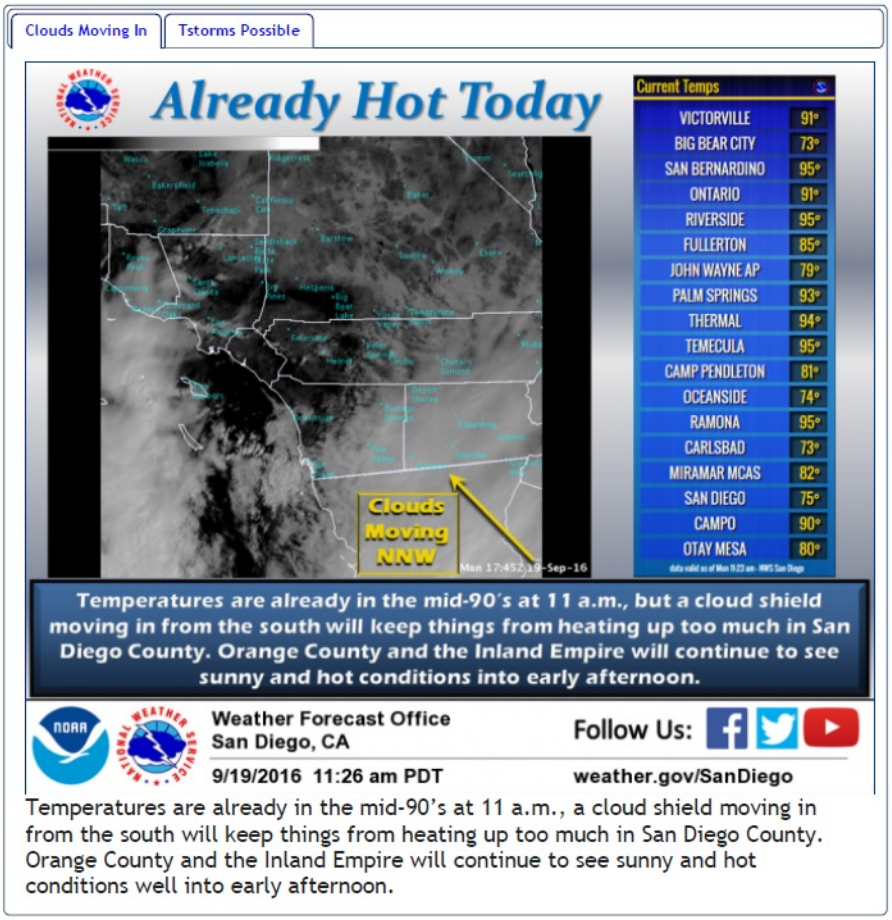
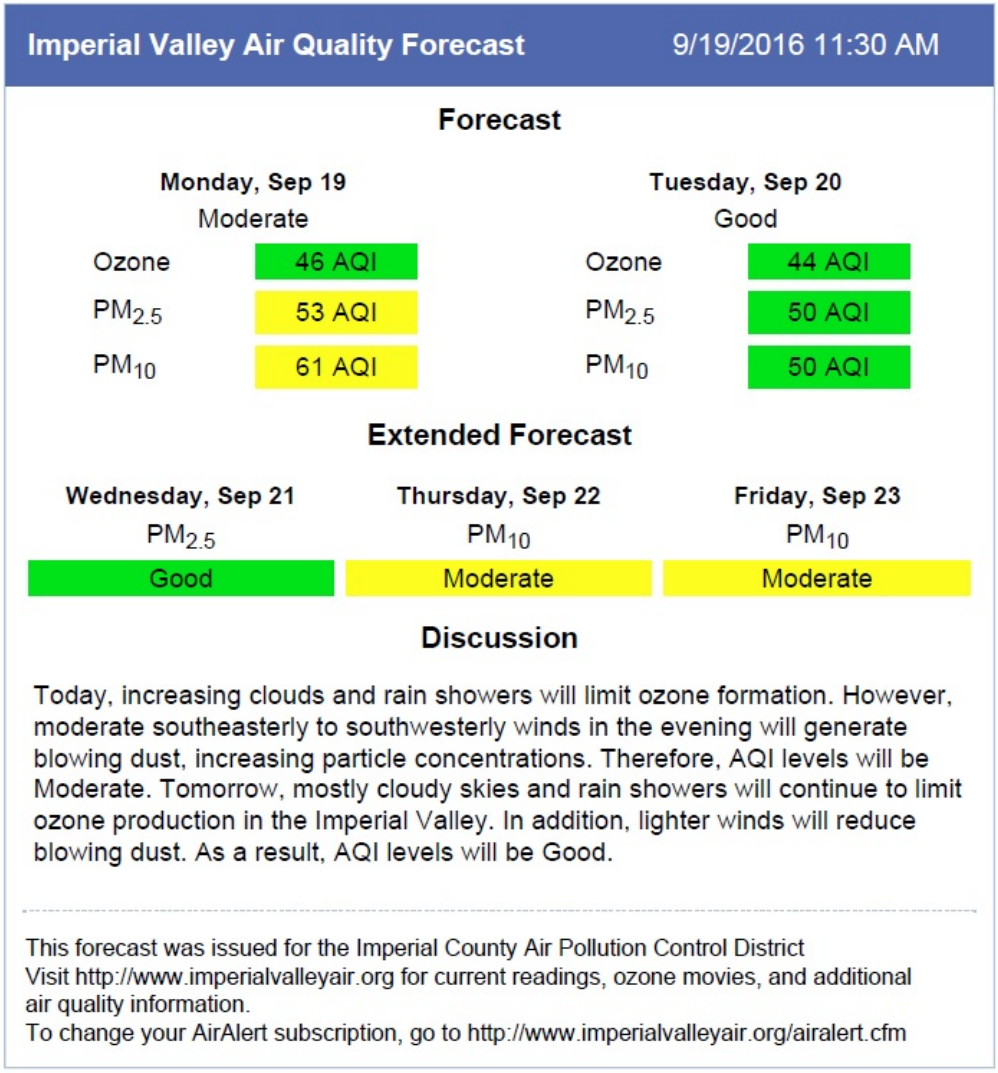


Fig. A-19: The moisture surging north from Hurricane Paine brought a thick cloud cover to the area. Source: NWS San Diego.

FIGURE A-20
AIR QUALITY FORECAST FOR BLOWING DUST



Imperial Valley Air Quality Forecast 9/19/2016 11:30 AM

Forecast

Monday, Sep 19	Moderate	Tuesday, Sep 20	Good
Ozone	46 AQI	Ozone	44 AQI
$PM_{2.5}$	53 AQI	$PM_{2.5}$	50 AQI
PM_{10}	61 AQI	PM_{10}	50 AQI

Extended Forecast

Wednesday, Sep 21	Thursday, Sep 22	Friday, Sep 23
$PM_{2.5}$	PM_{10}	PM_{10}
Good	Moderate	Moderate

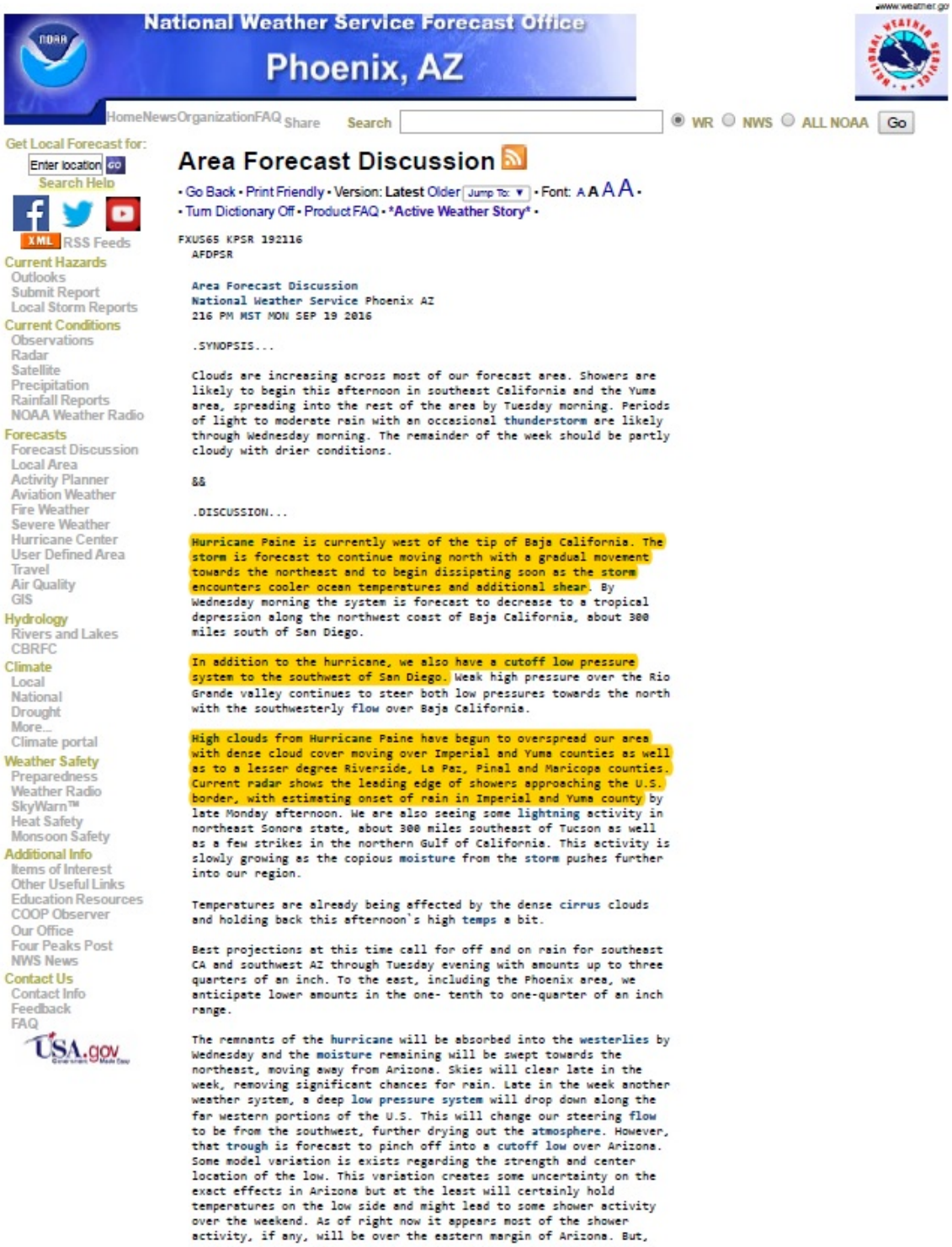
Discussion

Today, increasing clouds and rain showers will limit ozone formation. However, moderate southeasterly to southwesterly winds in the evening will generate blowing dust, increasing particle concentrations. Therefore, AQI levels will be Moderate. Tomorrow, mostly cloudy skies and rain showers will continue to limit ozone production in the Imperial Valley. In addition, lighter winds will reduce blowing dust. As a result, AQI levels will be Good.

This forecast was issued for the Imperial County Air Pollution Control District
Visit http://www.imperialvalleyair.org for current readings, ozone movies, and additional air quality information.
To change your AirAlert subscription, go to http://www.imperialvalleyair.org/airalert.cfm

Fig. A-20: The moisture surging north from Hurricane Paine brought a thick cloud cover to the area. Source: NWS San Diego.

FIGURE A-21
LEADING EDGE OF STORM CLOSES IN ON IMPERIAL COUNTY



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FXUS65 KPSR 192116
  AFDPSR

  Area Forecast Discussion
  National Weather Service Phoenix AZ
  216 PM MST MON SEP 19 2016

  .SYNOPSIS...

  Clouds are increasing across most of our forecast area. Showers are
  likely to begin this afternoon in southeast California and the Yuma
  area, spreading into the rest of the area by Tuesday morning. Periods
  of light to moderate rain with an occasional thunderstorm are likely
  through Wednesday morning. The remainder of the week should be partly
  cloudy with drier conditions.

  &&

  .DISCUSSION...

  Hurricane Paine is currently west of the tip of Baja California. The
  storm is forecast to continue moving north with a gradual movement
  towards the northeast and to begin dissipating soon as the storm
  encounters cooler ocean temperatures and additional shear. By
  Wednesday morning the system is forecast to decrease to a tropical
  depression along the northwest coast of Baja California, about 300
  miles south of San Diego.

  In addition to the hurricane, we also have a cutoff low pressure
  system to the southwest of San Diego. Weak high pressure over the Rio
  Grande valley continues to steer both low pressures towards the north
  with the southwesterly flow over Baja California.

  High clouds from Hurricane Paine have begun to overspread our area
  with dense cloud cover moving over Imperial and Yuma counties as well
  as to a lesser degree Riverside, La Paz, Pinal and Maricopa counties.
  Current radar shows the leading edge of showers approaching the U.S.
  border, with estimating onset of rain in Imperial and Yuma county by
  late Monday afternoon. We are also seeing some lightning activity in
  northeast Sonora state, about 300 miles southeast of Tucson as well
  as a few strikes in the northern Gulf of California. This activity is
  slowly growing as the copious moisture from the storm pushes further
  into our region.

  Temperatures are already being affected by the dense cirrus clouds
  and holding back this afternoon's high temps a bit.

  Best projections at this time call for off and on rain for southeast
  CA and southwest AZ through Tuesday evening with amounts up to three
  quarters of an inch. To the east, including the Phoenix area, we
  anticipate lower amounts in the one- tenth to one-quarter of an inch
  range.

  The remnants of the hurricane will be absorbed into the westerlies by
  Wednesday and the moisture remaining will be swept towards the
  northeast, moving away from Arizona. Skies will clear late in the
  week, removing significant chances for rain. Late in the week another
  weather system, a deep low pressure system will drop down along the
  far western portions of the U.S. This will change our steering flow
  to be from the southwest, further drying out the atmosphere. However,
  that trough is forecast to pinch off into a cutoff low over Arizona.
  Some model variation is exists regarding the strength and center
  location of the low. This variation creates some uncertainty on the
  exact effects in Arizona but at the least will certainly hold
  temperatures on the low side and might lead to some shower activity
  over the weekend. As of right now it appears most of the shower
  activity, if any, will be over the eastern margin of Arizona. But,
```

Fig. A-21: Radar returns showed the leading edge of the storm from Hurricane Paine approaching Imperial County mid-afternoon on September 19. Source: NWS Phoenix.

FIGURE A-22
BLOWING DUST ADVISORY FOR IMPERIAL COUNTY

URGENT - WEATHER MESSAGE
NATIONAL WEATHER SERVICE PHOENIX AZ
ISSUED BY NATIONAL WEATHER SERVICE TUCSON AZ
522 PM MST MON SEP 19 2016
AZZ020-025-026-CAZ031-033-200300-
/O.NEW.KPSR.DU.Y.0047.160920T0022Z-160920T0300Z/
LOWER COLORADO RIVER VALLEY AZ-YUMA/MARTINEZ LAKE AND VICINITYSOUTHWEST
DESERTS-LOWER COLORADO RIVER VALLEY CA-IMPERIAL COUNTYINCLUDING
THE CITIES OF...EHRENBERG...PARKER...
FORTUNA FOOTHILLS...SAN LUIS...SOMERTON...YUMA...DATELAND...
TACNA...WELLTON...BLYTHE...BRAWLEY...CALEXICO...EL CENTRO...
GLAMIS...IMPERIAL...THE SALTON SEA
522 PM MST MON SEP 19 2016 /522 PM PDT MON SEP 19 2016/

...**BLOWING DUST ADVISORY IN EFFECT UNTIL 8 PM MST /8 PM PDT/ THIS EVENING**...
THE NATIONAL WEATHER SERVICE IN PHOENIX HAS ISSUED A BLOWING DUST
ADVISORY...WHICH IS IN EFFECT UNTIL 8 PM MST /8 PM PDT/ THIS
EVENING.
* **AFFECTED AREA...SOUTHEAST CALIFORNIA** AND EXTREME SOUTHWEST
ARIZONA...INCLUDING INTERSTATE 8 BETWEEN YUMA AND EL CENTRO.
* TIMING...THROUGH EARLY THIS EVENING.
* **WINDS...SOUTH WINDS OVER 20 MILES PER HOUR**.
* **VISIBILITY...LOCALLY FALLING BELOW ONE MILE**.
* IMPACTS...REDUCED VISIBILITY WILL MAKE TRAVELING DIFFICULT,
ESPECIALLY ON INTERSTATE 8 AND OTHER HIGHWAYS NEAR EL CENTRO IN
IMPERIAL COUNTY.
PRECAUTIONARY/PREPAREDNESS ACTIONS...
BE READY FOR A SUDDEN DROP IN VISIBILITY. IF YOU ENCOUNTER
BLOWING DUST OR BLOWING SAND ON THE ROADWAY OR SEE IT
APPROACHING...PULL OFF THE ROAD AS FAR AS POSSIBLE AND PUT YOUR
VEHICLE IN PARK. TURN THE LIGHTS ALL THE WAY OFF AND KEEP YOUR
FOOT OFF THE BRAKE PEDAL.

Fig. A-22: A Blowing Dust Advisory was issued at 5:22 p.m. for Imperial County and neighboring regions due to the large amounts of dust expected to be entrained by the high winds. Source: NPW from NWS PSR; https://mesonet.agron.iastate.edu/wx/afos/p.php?pil=NPWPSR&e=201609200022.

FIGURE A-23
BLOWING DUST ADVISORY FOR IMPERIAL COUNTY CANCELLED

URGENT - WEATHER MESSAGE
NATIONAL WEATHER SERVICE PHOENIX AZ
ISSUED BY NATIONAL WEATHER SERVICE TUCSON AZ
732 PM MST MON SEP 19 2016
AZZ020-025-026-CAZ031-033-200345-
/O.CAN.KPSR.DU.Y.0047.000000T0000Z-160920T0300Z/
LOWER COLORADO RIVER VALLEY AZ-YUMA/MARTINEZ LAKE AND VICINITYSOUTHWEST
DESERTS-LOWER COLORADO RIVER VALLEY CA-IMPERIAL COUNTYINCLUDING
THE CITIES OF...EHRENBERG...PARKER...
FORTUNA FOOTHILLS...SAN LUIS...SOMERTON...YUMA...DATELAND...
TACNA...WELLTON...BLYTHE...BRAWLEY...CALEXICO...EL CENTRO...
GLAMIS...IMPERIAL...THE SALTON SEA
732 PM MST MON SEP 19 2016 /732 PM PDT MON SEP 19 2016/
...**BLOWING DUST ADVISORY IS CANCELLED**...
THE NATIONAL WEATHER SERVICE IN PHOENIX HAS CANCELLED THE BLOWING
DUST ADVISORY.
THE VISIBILITIES HAVE IMPROVED ALTHOUGH SOME LINGERING DUST AND RAIN
SHOWERS MAY KEEP SKIES HAZY FOR THE REMAINDER OF THE EVENING.

Fig. A-23: The Blowing Dust Advisory was cancelled at 732 p.m. Source: NPW from NWS PSR; https://mesonet.agron.iastate.edu/wx/afos/p.php?pil=NPWPSR&e=201609200232.

FIGURE A-24
REGIONAL WIND SPEEDS
Public Information Statement
National Weather Service Phoenix AZ
843 PM MST Mon Sep 19 2016

...Lower Colorado River Valley CA...
14 ENE Glamis 24 MPH 0500 PM 09/19 1939
...Lower Colorado River Valley AZ...

2 W Parker	23 MPH	0626 PM 09/19	362
1 SW Poston	21 MPH	0525 PM 09/19	312
3 SSW Cibola	20 MPH	0748 PM 09/19	229
...Imperial County... Naval Air Facility	49 MPH	0518 PM 09/19	-43
2 N Salton City	47 MPH	0601 PM 09/19	-154
17 NNW Coyote Wells	44 MPH	0626 PM 09/19	780
Imperial County Airport	44 MPH	0551 PM 09/19	0
6 E Winona	41 MPH	0600 PM 09/19	-232
Sunrise	35 MPH	0600 PM 09/19	694
4 ENE Gordon's Well	30 MPH	0509 PM 09/19	216
5 WSW Glamis	27 MPH	0810 PM 09/19	277
Mountain Springs Grade	27 MPH	0550 PM 09/19	2044
2 SW Niland	25 MPH	0700 PM 09/19	-176
3 SSE Imperial Hot Mineral S	22 MPH	0600 PM 09/19	-186
2 ESE Niland	19 MPH	0330 PM 09/19	-58
2 WNW Alamorio	18 MPH	0800 PM 09/19	242
11 NNE Gordon's Well	17 MPH	0610 PM 09/19	403
Westmorland	16 MPH	0600 PM 09/19	-104

...Riverside County/Eastern Deserts...

Blythe Airport	38 MPH	0703 PM 09/19	395
1 NNE Desert Center	29 MPH	0403 PM 09/19	720
17 E Desert Center	28 MPH	0700 PM 09/19	394
13 NNE Midland	26 MPH	0550 PM 09/19	831
8 NE Desert Center	25 MPH	0600 PM 09/19	556
10 WNW Imperial Hot Mineral	22 MPH	0614 PM 09/19	-95

...Yuma/Martinez Lake and Vicinity...

Yuma	32 MPH	0506 PM 09/19	213
3 SSW Yuma	25 MPH	0516 PM 09/19	185
1 SSW Winterhaven	20 MPH	0538 PM 09/19	125
6 W Fortuna Foothills	19 MPH	0559 PM 09/19	213
1 NNW Fortuna Foothills	16 MPH	0305 PM 09/19	285

Fig. A-24: The above wind speeds supports that this was a regional event. Source: PNS from NWS PSR; https://mesonet.agron.iastate.edu/wx/afos/p.php?pil=PNSPSR&e=201609200343.

FIGURE A-25
GUSTY WINDS OVER 40 MPH KICKED UP DUST
HURRICANE PAINE DISSIPATES AS LOW PRESSURE MOVES OFF

AREA FORECAST DISCUSSION
National Weather Service San Diego CA
908 PM PDT MON SEP 19 2016
.SYNOPSIS...
Clouds, mid level moisture, and areas of light rain will move across Southern California through tonight. More substantial moisture from the remnants of Hurricane Paine will bring greater chances for showers and thunderstorms late tonight and Tuesday. Precipitation chances will continue into Wednesday, mainly over the mountains and deserts. Cooler Thursday and Friday with gusty winds as a trough of low pressure moves in from the northwest. Warmer next weekend with periods of offshore flow.
.DISCUSSION...FOR EXTREME SOUTHWESTERN CALIFORNIA INCLUDING ORANGE... SAN DIEGO...WESTERN RIVERSIDE AND SOUTHWESTERN SAN BERNARDINO COUNTIES...
The Fire Weather Watch has expired...the atmosphere will continue to moisten overnight into Tue, decreasing the threat for dry lightning. Clouds continued to spread north from the subtropics this evening ahead of Hurricane Paine, which was located about 570 miles due south of San Diego at 7 PM PDT this evening, moving north at about 15 MPH. The 00Z Miramar sounding still had a substantial dry layer below 14K F, but PW was increasing due to the increasing moisture above. Some weak instability was noted above 12K FT, otherwise the potential instability was low. the column was warming above 16K Ft, and cooling below which held a lid on any convection today. All of the lightning strikes were located well out to sea today and were decreasing this evening. **However, the virga falling into the dry layer earlier this evening did manage to create some strong wind gusts over 40 MPH over the lower deserts and near Campo. This has kicked up areas of dust which made it into portions of the Coachella Valley**.
Expect the blowing dust threat to diminish as the lower atmosphere moistens tonight. The clouds and increasing moisture will make for a fairly warm and humid night. There will be an increasing chance for showers into Tue and continued humid.
The Pattern...A cut-off low was centered about 380 Miles WSW of San Diego this evening. The low is forecast to begin moving NE tonight and open into a weak wave on Tue, then be absorbed into the westerlies to the north by evening. At the same time, Tropical Cyclone Paine will weaken and continue on a northward heading, expected to come onshore over the Baja about 200 miles south of San Diego late Wed afternoon. The westerlies will dive south across CA on Thu as a short-wave trough deepens into the Great Basin and eventually cuts off over AZ this weekend.

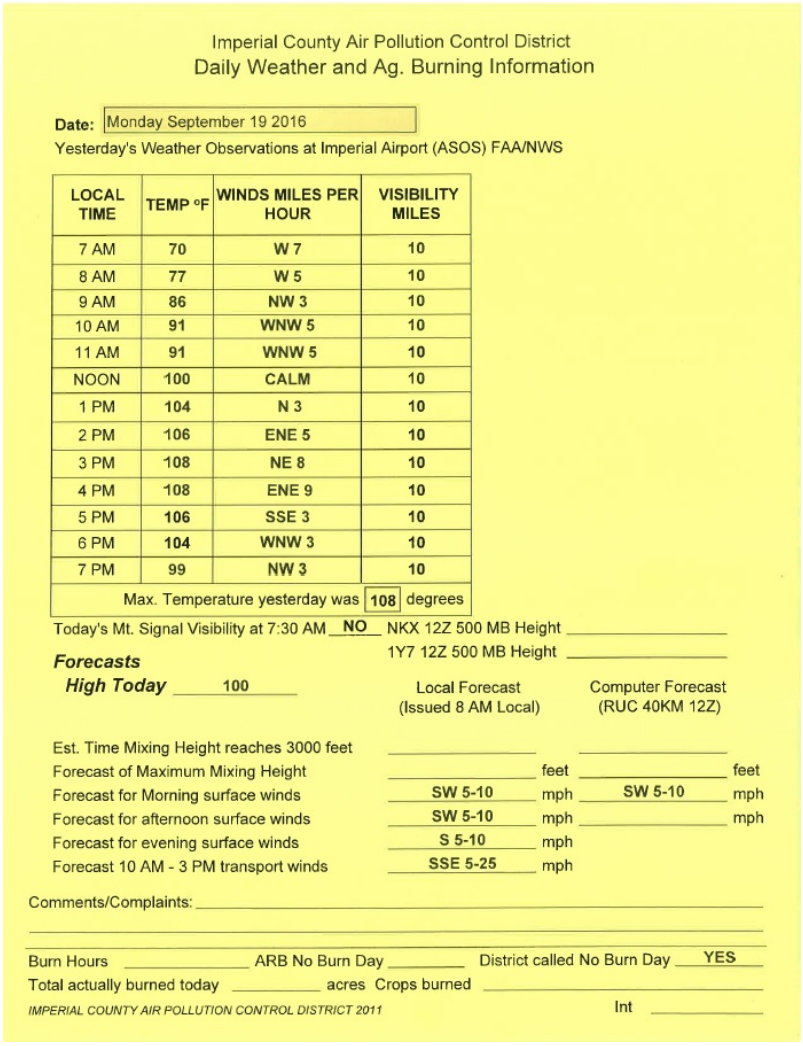
Fig. A-25: As Hurricane Paine began to dissipate and the low off the California coast began to move off, thunderstorm activity began to decrease. However, wind gusts over 40 mph were reported in the lower deserts which kicked up some dust. Source: AFD from NWS SGX; https://mesonet.agron.iastate.edu/wx/afos/p.php?pil=AFDSGX&e=201609200408.

FIGURE A-26
AIR QUALITY INDEX

Air Quality Index Levels of Health Concern	Numerical Value	Meaning
Good	0 to 50	Air quality is considered satisfactory, and air pollution poses little or no risk.
Moderate	51 to 100	Air quality is acceptable; however, for some pollutants there may be a moderate health concern for a very small number of people who are unusually sensitive to air pollution.
Unhealthy for Sensitive Groups	101 to 150	Members of sensitive groups may experience health effects. The general public is not likely to be affected.
Unhealthy	151 to 200	Everyone may begin to experience health effects; members of sensitive groups may experience more serious health effects.
Very Unhealthy	201 to 300	Health alert: everyone may experience more serious health effects.
Hazardous	301 to 500	Health warnings of emergency conditions. The entire population is more likely to be affected.

Fig. A-26: The Air Quality Index The AQI is an index for reporting daily air quality. It tells you how clean or polluted your air is, and what associated health effects might be a concern for you. The AQI focuses on health effects you may experience within a few hours or days after breathing polluted air. EPA calculates the AQI for five major air pollutants regulated by the Clean Air Act: ground-level ozone, particle pollution (also known as particulate matter), carbon monoxide, sulfur dioxide, and nitrogen dioxide. For each of these pollutants, EPA has established national air quality standards to protect public health .Ground-level ozone and airborne particles are the two pollutants that pose the greatest threat to human health in this country. Source: https://airnow.gov/index.cfm?action=aqibasics.aqi.

FIGURE A-27
IMPERIAL COUNTY APCD ISSUES LIMITED BURN DAY



Imperial County Air Pollution Control District
Daily Weather and Ag. Burning Information

Date: Monday September 19 2016

Yesterday's Weather Observations at Imperial Airport (ASOS) FAA/NWS

LOCAL TIME	TEMP °F	WINDS MILES PER HOUR	VISIBILITY MILES
7 AM	70	W 7	10
8 AM	77	W 5	10
9 AM	86	NW 3	10
10 AM	91	WNW 5	10
11 AM	91	WNW 5	10
NOON	100	CALM	10
1 PM	104	N 3	10
2 PM	106	ENE 5	10
3 PM	108	NE 8	10
4 PM	108	ENE 9	10
5 PM	106	SSE 3	10
6 PM	104	WNW 3	10
7 PM	99	NW 3	10

Max. Temperature yesterday was 108 degrees

Today's Mt. Signal Visibility at 7:30 AM NO

NKX 12Z 500 MB Height _____

1Y7 12Z 500 MB Height _____

Forecasts

High Today 100

	Local Forecast (Issued 8 AM Local)	Computer Forecast (RUC 40KM 12Z)
Est. Time Mixing Height reaches 3000 feet	_____	_____
Forecast of Maximum Mixing Height	_____ feet	_____ feet
Forecast for Morning surface winds	SW 5-10 mph	SW 5-10 mph
Forecast for afternoon surface winds	SW 5-10 mph	_____ mph
Forecast for evening surface winds	S 5-10 mph	
Forecast 10 AM - 3 PM transport winds	SSE 5-25 mph	

Comments/Complaints: _____

Burn Hours _____ ARB No Burn Day _____ District called No Burn Day YES

Total actually burned today _____ acres Crops burned _____

IMPERIAL COUNTY AIR POLLUTION CONTROL DISTRICT 2011

Int _____

Fig. A-27: A copy of the Imperial County Air Pollution Control District official record of the conditions as they existed on September 19, 2016. A No Burn Day was declared. Source: ICAPCD Archives.

FIGURE A-28
IMPERIAL COUNTY AFFIDAVIT 30 DAY PUBLIC NOTICE

AFFIDAVIT OF PUBLICATION
(2015.5 C.C.P.)

STATE OF CALIFORNIA

County of Imperial

I am a resident of the County aforesaid; I am over the age of eighteen years, and not a party to or interested in the above entitled matter. I am the principal clerk* of the printer of the

Imperial Valley Press

a newspaper of general circulation, printed and published daily in the City of El Centro, County of Imperial and which newspaper has been adjudged a newspaper of genera circulation by the Superior Court of the County of Imperial, State of California, under the date of October 9, 1951, Case Number 26775; that the notice, of which the annexed is a printed copy, has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to-wit:

08/17 .

all in the year 2018

I certify (or declare) under penalty of perjury that the foregoing is true and correct.

SIGNATURE

Name of Account: I C AIR POLLUTION CONTROL
Order Number: 11205953
Ad Number: 31436487

* Printer, Foreman of the Printer, or Principal Clerk of the Printer
Date: 17 th day of August, 2018.
at El Centro, California.

This space is for the County Clerk's Filling Stamp:

RECEIVED
AUG 22 2018
AIR POLLUTION CONTROL DISTRICT

NOTICE OF AVAILABILITY
OF THE DEMONSTRATION OF THE OCCURRENCE
OF FOUR EXCEPTIONAL EVENTS (EE)

The Imperial County Air Pollution Control District (Air District) has prepared four Draft Exceptional Event (EE) Demonstrations, which support the requested exclusion of measured 24-hour concentrations at the Air District air monitoring sites. Listed below by date, site and concentration as measured by a continuous Federal Equivalent Method monitor (FEM) are the four Draft EE's.

August 19, 2016 and August 21, 2016
Brawley -156 µg/m3 and Westmorland -164 µg/m3
El Centro - 170 µg/m3

September 19, 2016
Westmorland -177 µg/m3

October 30, 2016
Brawley -162 µg/m3

December 16, 2016
Brawley -645 µg/m3 and Calexico -238 µg/m3
El Centro -207 µg/m3 and Niland -530 µg/m3
Westmorland -733 µg/m3

The public and all interested parties are encouraged to review and comment on the four Draft EE's listed above. These demonstrations provide the supporting evidence that on the days indicated for 2016 Air District air monitors were affected by transported elevated levels of particulate matter of an aerodynamic size less than 10 microns (PM10). Winds, associated with a weather events suspended and transported PM10 into the region affecting areas within San Diego, Riverside, Yuma and Imperial counties. The four Draft EE's provide the scientific justification for the requested exclusions. The Air District is soliciting and accepting comments for 30 days commencing the date of the publication of this notice. The final closing date for submitting comments is September 17, 2018 by close of business.

The four Draft EE's for days listed above are available for download at the Air District website at www.co.imperial.ca.us, under "Air Pollution". To view a hard copy of any of the four Draft EE's, please visit the Air Pollution Control District office at 150 S. 9th Street, El Centro. Should you have any questions or concerns please feel free to call our office between 8am and 5pm at (442) 265-1800 and ask for Monica N. Soucier.
L273 Au17

Fig A-28: A copy of the Imperial County Air Pollution Control District official record (affidavit) affirming the publication of the notice of availability of the Exceptional Event Demonstration for September 19, 2016. The date for closing comments was September 17, 2018

FIGURE A-29
IMPERIAL COUNTY
COMMENTS REGARDING THE SEPTEMBER 19, 2016 EE DEMONSTRATION

The ICAPCD did not receive any comments